

5000  
UNKNOWN

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.

Application Serial Number: 10/516,338

Source: P4710

Date Processed by STIC: 12/9/04

# ***ENTERED***



PCT

## RAW SEQUENCE LISTING

DATE: 12/09/2004

PATENT APPLICATION: US/10/516,338

TIME: 14:36:59

Input Set : A:\6047252.app

Output Set: N:\CRF4\12092004\J516338.raw

```

3 <110> APPLICANT: Astex Technology Limited
4     Cosme, Jose
5     Ward, Alison
6     Vuillard, Laurent
7     Williams, Pamela
8     Hamilton, Bruce
10 <120> TITLE OF INVENTION: Methods of Purification of Cytochrome P450 Proteins
12 <130> FILE REFERENCE: AHBCP6047252
C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/516,338
C--> 15 <141> CURRENT FILING DATE: 2004-11-30
17 <160> NUMBER OF SEQ ID NOS: 84
19 <170> SOFTWARE: PatentIn Ver. 2.1
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 1428
23 <212> TYPE: DNA
24 <213> ORGANISM: Artificial Sequence
26 <220> FEATURE:
27 <223> OTHER INFORMATION: Description of Artificial Sequence: 2C19 (internal
28     deletion, and His tagged) coding sequence.
30 <400> SEQUENCE: 1
31 atggctaaga aaacgagctc taaagggcgg ccgcctggcc ccactcctct cccagtgatt 60
32 ggaaatatcc tacagataga tattaaggat gtcagcaaat ccttaaccaa tctctcaaaa 120
33 atctatggcc ctgtgttcac tctgtatttt ggcctggaac gcatgggtgt gctgcatgga 180
34 tatgaagtgg tgaaggaagc cctgattgat cttggagagg agttttctgg aagaggccat 240
35 tccccactgg ctgaaagagc taacagagga tttggaatcg ttttcagcaa tggaaagaga 300
36 tgggaaggaga tccggcgctt ctccctcatg acgctgcgga attttgggat ggggaagagg 360
37 agcattgagg accgtgttca agaggaagcc cactgccttg tggaggagt gagaaaaacc 420
38 aaggcttcac cctgtgatcc cactttcatc ctgggctgtg ctccctgcaa tgtgatctgc 480
39 tccattatth tccagaaacg tttcgattat aaagatcagc aatttcttaa cttgatggaa 540
40 aaattgaatg aaaacatcag gattgtgaagc accccctgga tccagatatg caataattht 600
41 cccactatca ttgattatth cccgggaacc cataacaaat tacttaaaaa ctttgcttht 660
42 atggaaagtg atatthtggg gaaagtaaaa gaacaccaag aatcgatgga catcaacaac 720
43 cctcgggact ttattgattg cttcctgatc aaaatggaga aggaaaagca aaaccaacag 780
44 tctgaattca ctattgaaaa cttggtaatc actgcagctg acttacttgg agctgggaca 840
45 gagacaacaa gcacaacct gagatatgct ctcttctcc tgctgaagca cccagaggtc 900
46 acagctaaag tccaggaaga gattgaacgt gtcgttggca gaaaccggag cccctgcatg 960
47 caggacaggg gccacatgcc ctacacagat gctgtggtgc acgaggtcca gagatacat 1020
48 gacctcatcc ccaccagcct gccccatgca gtgacctgtg acgttaaatt cagaaactac 1080
49 ctcatthcca agggcacaa catattaaact tccctcactt ctgtgctaca tgacaacaaa 1140
50 gaattthcca acccagagat gtttgacct cgtcacttht tgcattgaagg tggaaattht 1200
51 aagaaaagta actacttcat gcctthtctca gcaggaaaac ggatttgtgt gggagagggc 1260
52 ctggcccgca tggagctgtt thtattctctg accttcattt tacagaactt taacctgaaa 1320
53 tctctgattg acccaaagga ccttgacaca actcctgttg tcaatggatt tgcttctgtc 1380

```

## RAW SEQUENCE LISTING

DATE: 12/09/2004

PATENT APPLICATION: US/10/516,338

TIME: 14:36:59

Input Set : A:\6047252.app

Output Set: N:\CRF4\12092004\J516338.raw

```

54 cgcgccttct accagctctg cttcattcct gtccaccacc accactga      1428
57 <210> SEQ ID NO: 2
58 <211> LENGTH: 475
59 <212> TYPE: PRT
60 <213> ORGANISM: Artificial Sequence
62 <220> FEATURE:
63 <223> OTHER INFORMATION: Description of Artificial Sequence: Protein
64     sequence of 2C19 coded by SEQ ID NO: 1
66 <400> SEQUENCE: 2
67 Met Ala Lys Lys Thr Ser Ser Lys Gly Arg Pro Pro Gly Pro Thr Pro
68   1           5           10           15
70 Leu Pro Val Ile Gly Asn Ile Leu Gln Ile Asp Ile Lys Asp Val Ser
71           20           25           30
73 Lys Ser Leu Thr Asn Leu Ser Lys Ile Tyr Gly Pro Val Phe Thr Leu
74           35           40           45
76 Tyr Phe Gly Leu Glu Arg Met Val Val Leu His Gly Tyr Glu Val Val
77           50           55           60
79 Lys Glu Ala Leu Ile Asp Leu Gly Glu Glu Phe Ser Gly Arg Gly His
80   65           70           75           80
82 Phe Pro Leu Ala Glu Arg Ala Asn Arg Gly Phe Gly Ile Val Phe Ser
83           85           90           95
85 Asn Gly Lys Arg Trp Lys Glu Ile Arg Arg Phe Ser Leu Met Thr Leu
86           100          105          110
88 Arg Asn Phe Gly Met Gly Lys Arg Ser Ile Glu Asp Arg Val Gln Glu
89           115          120          125
91 Glu Ala His Cys Leu Val Glu Glu Leu Arg Lys Thr Lys Ala Ser Pro
92           130          135          140
94 Cys Asp Pro Thr Phe Ile Leu Gly Cys Ala Pro Cys Asn Val Ile Cys
95 145          150          155          160
97 Ser Ile Ile Phe Gln Lys Arg Phe Asp Tyr Lys Asp Gln Gln Phe Leu
98           165          170          175
100 Asn Leu Met Glu Lys Leu Asn Glu Asn Ile Arg Ile Val Ser Thr Pro
101           180          185          190
103 Trp Ile Gln Ile Cys Asn Asn Phe Pro Thr Ile Ile Asp Tyr Phe Pro
104           195          200          205
106 Gly Thr His Asn Lys Leu Leu Lys Asn Leu Ala Phe Met Glu Ser Asp
107           210          215          220
109 Ile Leu Glu Lys Val Lys Glu His Gln Glu Ser Met Asp Ile Asn Asn
110 225          230          235          240
112 Pro Arg Asp Phe Ile Asp Cys Phe Leu Ile Lys Met Glu Lys Glu Lys
113           245          250          255
115 Gln Asn Gln Gln Ser Glu Phe Thr Ile Glu Asn Leu Val Ile Thr Ala
116           260          265          270
118 Ala Asp Leu Leu Gly Ala Gly Thr Glu Thr Thr Ser Thr Thr Leu Arg
119           275          280          285
121 Tyr Ala Leu Leu Leu Leu Lys His Pro Glu Val Thr Ala Lys Val
122           290          295          300
124 Gln Glu Glu Ile Glu Arg Val Val Gly Arg Asn Arg Ser Pro Cys Met
125 305          310          315          320

```

## RAW SEQUENCE LISTING

DATE: 12/09/2004

PATENT APPLICATION: US/10/516,338

TIME: 14:36:59

Input Set : A:\6047252.app

Output Set: N:\CRF4\12092004\J516338.raw

```

127 Gln Asp Arg Gly His Met Pro Tyr Thr Asp Ala Val Val His Glu Val
128           325           330           335
130 Gln Arg Tyr Ile Asp Leu Ile Pro Thr Ser Leu Pro His Ala Val Thr
131           340           345           350
133 Cys Asp Val Lys Phe Arg Asn Tyr Leu Ile Pro Lys Gly Thr Thr Ile
134           355           360           365
136 Leu Thr Ser Leu Thr Ser Val Leu His Asp Asn Lys Glu Phe Pro Asn
137           370           375           380
139 Pro Glu Met Phe Asp Pro Arg His Phe Leu His Glu Gly Gly Asn Phe
140 385           390           395           400
142 Lys Lys Ser Asn Tyr Phe Met Pro Phe Ser Ala Gly Lys Arg Ile Cys
143           405           410           415
145 Val Gly Glu Gly Leu Ala Arg Met Glu Leu Phe Leu Phe Leu Thr Phe
146           420           425           430
148 Ile Leu Gln Asn Phe Asn Leu Lys Ser Leu Ile Asp Pro Lys Asp Leu
149           435           440           445
151 Asp Thr Thr Pro Val Val Asn Gly Phe Ala Ser Val Pro Pro Phe Tyr
152           450           455           460
154 Gln Leu Cys Phe Ile Pro Val His His His His
155 465           470           475
158 <210> SEQ ID NO: 3
159 <211> LENGTH: 1428
160 <212> TYPE: DNA
161 <213> ORGANISM: Artificial Sequence
163 <220> FEATURE:
164 <223> OTHER INFORMATION: Description of Artificial Sequence: 2C19 wild type
165 1B
167 <400> SEQUENCE: 3
168 atggctaaga aaacgagctc taaagggcgg cgcctggcc ctactcctct cccagtgatt 60
169 ggaaatatcc tacagataga tattaaggat gtcagcaaat ccttaaccaa tctctcaaaa 120
170 atctatggcc ctgtgttcac tctgtatttt ggccctggaac gcatggtggt gctgcatgga 180
171 tatgaagtgg tgaaggaagc cctgattgat cttggagagg agttttctgg aagaggccat 240
172 ttcccactgg ctgaaagagc taacagagga tttggaatcg ttttcagcaa tggaaagaga 300
173 tggaaggaga tccggcggtt ctccctcatg acgctgcgga attttgggat ggggaagagg 360
174 agcattgagg accgtgttca agaggaagcc cgctgccttg tggaggagtt gagaaaaacc 420
175 aaagcttcac cctgtgatcc cactttcatc ctgggctgtg ctccctgcaa tgtgatctgc 480
176 tccattatth tccagaaacg ttctgattat aaagatcagc aatttcttaa cttgatggaa 540
177 aaattgaatg aaaacatcag gattgtaagc accccctgga tccagatatg caataatttt 600
178 cccactatca ttgattatth cccgggaacc cataacaaat tacttaaaaa ccttgctttt 660
179 atggaaagtg atattttgga gaaagtaaaa gaacaccaag aatcgatgga catcaacaac 720
180 cctcgggact ttattgattg cttcctgatc aaaatggaga aggaaaagca aaaccaacag 780
181 tctgaattca ctattgaaaa cttggtaatc actgcagctg acttacttgg agctgggaca 840
182 gagacaacaa gcacaaccct gagatatgct ctccctctcc tgctgaagca cccagaggtc 900
183 acagctaaag tccaggaaga gattgaacgt gtcgttggca gaaaccggag ccctgcatg 960
184 caggacaggg gccacatgcc ctacacagat gctgtggtgc acgaggtcca gagatacatc 1020
185 gacctcatcc ccaccagcct gcccatgca gtgacctgtg acgttaaatt cagaaactac 1080
186 ctcatthccc agggcacaac catattaact tccctcactt ctgtgctaca tgacaacaaa 1140
187 gaattthccc acccagagat gtttgacctt cgtcactttc tggatgaagg tggaaatttt 1200
188 aagaaaagta actacttcat gcctttctca gcaggaaaac ggatttgtgt gggagagggc 1260

```

## RAW SEQUENCE LISTING

DATE: 12/09/2004

PATENT APPLICATION: US/10/516,338

TIME: 14:36:59

Input Set : A:\6047252.app

Output Set: N:\CRF4\12092004\J516338.raw

```

189 ctggcccgcga tggagctgtt tttattcctg accttcattt tacagaactt taacctgaaa 1320
190 tctctgattg acccaaagga ccttgacaca actcctgttg tcaatggatt tgcttctgtc 1380
191 ccgcccttct accagctctg cttcattcct gtccaccacc accactga 1428
194 <210> SEQ ID NO: 4
195 <211> LENGTH: 475
196 <212> TYPE: PRT
197 <213> ORGANISM: Artificial Sequence
199 <220> FEATURE:
200 <223> OTHER INFORMATION: Description of Artificial Sequence: Translation of
201     SEQ ID NO:3
203 <400> SEQUENCE: 4
204 Met Ala Lys Lys Thr Ser Ser Lys Gly Arg Pro Pro Gly Pro Thr Pro
205   1           5           10           15
207 Leu Pro Val Ile Gly Asn Ile Leu Gln Ile Asp Ile Lys Asp Val Ser
208           20           25           30
210 Lys Ser Leu Thr Asn Leu Ser Lys Ile Tyr Gly Pro Val Phe Thr Leu
211           35           40           45
213 Tyr Phe Gly Leu Glu Arg Met Val Val Leu His Gly Tyr Glu Val Val
214           50           55           60
216 Lys Glu Ala Leu Ile Asp Leu Gly Glu Glu Phe Ser Gly Arg Gly His
217           65           70           75           80
219 Phe Pro Leu Ala Glu Arg Ala Asn Arg Gly Phe Gly Ile Val Phe Ser
220           85           90           95
222 Asn Gly Lys Arg Trp Lys Glu Ile Arg Arg Phe Ser Leu Met Thr Leu
223           100          105          110
225 Arg Asn Phe Gly Met Gly Lys Arg Ser Ile Glu Asp Arg Val Gln Glu
226           115          120          125
228 Glu Ala Arg Cys Leu Val Glu Leu Arg Lys Thr Lys Ala Ser Pro
229           130          135          140
231 Cys Asp Pro Thr Phe Ile Leu Gly Cys Ala Pro Cys Asn Val Ile Cys
232           145          150          155          160
234 Ser Ile Ile Phe Gln Lys Arg Phe Asp Tyr Lys Asp Gln Gln Phe Leu
235           165          170          175
237 Asn Leu Met Glu Lys Leu Asn Glu Asn Ile Arg Ile Val Ser Thr Pro
238           180          185          190
240 Trp Ile Gln Ile Cys Asn Asn Phe Pro Thr Ile Ile Asp Tyr Phe Pro
241           195          200          205
243 Gly Thr His Asn Lys Leu Leu Lys Asn Leu Ala Phe Met Glu Ser Asp
244           210          215          220
246 Ile Leu Glu Lys Val Lys Glu His Gln Glu Ser Met Asp Ile Asn Asn
247           225          230          235          240
249 Pro Arg Asp Phe Ile Asp Cys Phe Leu Ile Lys Met Glu Lys Glu Lys
250           245          250          255
252 Gln Asn Gln Gln Ser Glu Phe Thr Ile Glu Asn Leu Val Ile Thr Ala
253           260          265          270
255 Ala Asp Leu Leu Gly Ala Gly Thr Glu Thr Thr Ser Thr Thr Leu Arg
256           275          280          285
258 Tyr Ala Leu Leu Leu Leu Leu Lys His Pro Glu Val Thr Ala Lys Val
259           290          295          300

```

## RAW SEQUENCE LISTING

DATE: 12/09/2004

PATENT APPLICATION: US/10/516,338

TIME: 14:36:59

Input Set : A:\6047252.app

Output Set: N:\CRF4\12092004\J516338.raw

```

261 Gln Glu Glu Ile Glu Arg Val Val Gly Arg Asn Arg Ser Pro Cys Met
262 305                               310                               315                               320
264 Gln Asp Arg Gly His Met Pro Tyr Thr Asp Ala Val Val His Glu Val
265                               325                               330                               335
267 Gln Arg Tyr Ile Asp Leu Ile Pro Thr Ser Leu Pro His Ala Val Thr
268                               340                               345                               350
270 Cys Asp Val Lys Phe Arg Asn Tyr Leu Ile Pro Lys Gly Thr Thr Ile
271                               355                               360                               365
273 Leu Thr Ser Leu Thr Ser Val Leu His Asp Asn Lys Glu Phe Pro Asn
274                               370                               375                               380
276 Pro Glu Met Phe Asp Pro Arg His Phe Leu Asp Glu Gly Gly Asn Phe
277 385                               390                               395                               400
279 Lys Lys Ser Asn Tyr Phe Met Pro Phe Ser Ala Gly Lys Arg Ile Cys
280                               405                               410                               415
282 Val Gly Glu Gly Leu Ala Arg Met Glu Leu Phe Leu Phe Leu Thr Phe
283                               420                               425                               430
285 Ile Leu Gln Asn Phe Asn Leu Lys Ser Leu Ile Asp Pro Lys Asp Leu
286                               435                               440                               445
288 Asp Thr Thr Pro Val Val Asn Gly Phe Ala Ser Val Pro Pro Phe Tyr
289                               450                               455                               460
291 Gln Leu Cys Phe Ile Pro Val His His His His
292 465                               470                               475
295 <210> SEQ ID NO: 5
296 <211> LENGTH: 1443
297 <212> TYPE: DNA
298 <213> ORGANISM: Artificial Sequence
300 <220> FEATURE:
301 <223> OTHER INFORMATION: Description of Artificial Sequence: 2D6 encoding
302     nucleic acid
304 <400> SEQUENCE: 5
305 atggcgtaaaa aaacctcttc taaaggccga ccgccgggtc cgctgccgct gccaggcctg 60
306 ggtaacctgc tgcattgtgga cttccagaac acccgtact gcttcgacca gctgcgtcgt 120
307 cgtttcgggtg acgtgtttct tctgcagctg gcttggaccc cggttgttgt tctgaacggg 180
308 ctggctgctg ttccgcaagc tctggttacc cacggtgaag acaccgctga ccgtccgccg 240
309 gtcccgatca ccagatcct gggttttggt ccgcgttccc aaggtgtttt cctggctcgt 300
310 tacggaccgg cttggcgtga acagcgtcgt ttctctgttt ctaccctgcg taacctgggt 360
311 ctgggtaaaa aatctctgga acagtgggtt accgaagaag ctgcatgcct gtgcgtgct 420
312 ttcgctaacc actctggctg tccgttccgt ccgaacggtc tgctggacaa agctgtttct 480
313 aacgttatcg cttctctgac ctgcggccgc cgtttcgaat acgacgacct gcgtttcctg 540
314 cgtctgctgg acctggctca ggaaggctct aaagaggagt ctggtttctt gcgtgaagtt 600
315 ctgaacgctg ttccggttct gctgcacatc ccagctctgg ctggtaaagt tctgcgtttc 660
316 cagaaagcat tcctgacctc gctggacgaa ctgctgacct aacaccgtat gacctgggac 720
317 ccggctcagc cgccacgtga cctgaccgaa gctttcctgg ctgaaatgga aaaagctaaa 780
318 ggtaaccgga aatcttcttt caacgatgaa aatctgcgta tcgttggtgc tgacctgttc 840
319 tccgcgggta tgggtaccac ctctaccacc ctggcttggt gtctgctgct gatgatcctg 900
320 caccggatg tacagcgtcg tggtcagcag gaaatcgacg acgttattgg ccaggttcgt 960
321 cggccgtaaa tgggtgacca ggctcacatg ccgtacacca ccgctgttat ccacgaagtt 1020
322 cagcgtttcg gtgacatcgt tccgctgggt atgacctaca tgacctctcg tgacatcgaa 1080
323 gttcagggtt tccgtatccc gaaagggtacc acctgatca ccaacctgtc ttctgttctg 1140

```

VERIFICATION SUMMARY

DATE: 12/09/2004

PATENT APPLICATION: US/10/516,338

TIME: 14:37:00

Input Set : A:\6047252.app

Output Set: N:\CRF4\12092004\J516338.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application Number

L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date